



DIETARY REFERENCE INTAKES

*Guiding
Principles for
Nutrition
Labeling and
Fortification*

Committee on Use of Dietary Reference Intakes in
Nutrition Labeling
Food and Nutrition Board

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

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*“Knowing is not enough; we must apply.
Willing is not enough; we must do.”*
—Goethe



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This report has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the NRC's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. We wish to thank the following individuals for their review of this report:

Richard Black, International Life Sciences Institute, North America; Susan Borra, International Food and Information Council; Robert O. Earl, National Food Processors Association; John W. Erdman, University of Illinois; Nancy D. Ernst, Ernst Nutrition Consulting; Kenneth Fisher, KD Consultants; Cutberto Garza, Cornell University; Katherine Gray-Donald, McGill University; Peter Barton Hutt, Covington & Burling; Gilbert Leveille, Cargill, Inc.; Ian C. Munro, Cantox Health Sciences International; Suzanne P. Murphy, University of Hawaii; Lynn Parker, Food Research and Action Center; Donna Porter, Congressional Research Service; George F. Sheldon, The University of North Carolina at Chapel Hill; John Vanderveen, San Antonio, Texas; and Kathryn L. Wiemer, General Mills.

Although the reviewers listed above have provided many constructive comments and suggestions, they were not asked to endorse the conclusions or recommendations nor did they see the final draft of the report before its release. The review of this report was overseen by Maldon C. Nesheim, Cornell University, and Enriqueta Bond, Burroughs Wellcome Fund. Appointed by the Institute of Medicine and the National Research Council, they were responsible for making certain that an independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this report rests entirely with the authoring committee and the institution.

Preface

The task for the Committee on Use of Dietary Reference Intakes in Nutrition Labeling, which I was privileged to chair, was to provide guidance to the U.S. Department of Health and Human Services' Food and Drug Administration (FDA), the U.S. Department of Agriculture's Food Safety and Inspection Service (FSIS), and Health Canada on how to use the Dietary Reference Intakes (DRIs) to update the nutrient reference values used in nutrition labeling. The committee was also asked to produce guidance on how to use the DRIs when making decisions about the discretionary fortification of food.

The evolution of the current seven plus DRI volumes from a single-volume book of Recommended Dietary Allowances (RDAs) in the United States and from Recommended Nutrient Intakes (RNIs) in Canada reflects the tremendous surge in the scientific understanding of basic nutrition and the relationships between diet and health in the 8 years between the publication of the last RDA and RNI books and the first volume of the DRIs. The DRIs are definitely *not* your mother's RDAs or RNIs! They include four reference values: the RDA, the Estimated Average Requirement (EAR), the Adequate Intake (AI), and the Tolerable Upper Intake Level (UL). (An overview of the DRIs and their derivation is provided in Chapter 4.)

The report before you represents the result of six meetings, numerous phone conferences, and much writing by the scientists on this committee who volunteered their time to work with the complexity of these issues. First and foremost, I want to acknowledge them for their dedication and perseverance in working through the

diversity of issues and bringing to the discussion their depth of expertise in the diverse areas necessary for a report such as this. Second, I want to thank Linda Meyers, study director, for her leadership in helping all of us stay focused on the task at hand and for providing support to our endeavor in so many ways. I especially thank our expert consultant, Bernadette Marriott, for her vital contributions that were essential and critical to the completion of the report. The committee appreciates the assistance of the Food and Nutrition Board (FNB) staff in developing this report, particularly that of Romy Gunther-Nathan for her contributions as the original co-study director, Harleen Sethi for making our meetings and conference calls run so smoothly, Tazima Davis for her research assistance, Shannon Ruddy for assisting in the completion of the report, and Gail Spears for her technical editing. We wish to thank Allison Yates, former FNB Director, for her thoughtful interactions and discussions with the committee on some of the more difficult issues. The committee also benefited greatly from the statistical and computer skills of Craig Johnson. The committee held two workshops to broaden its knowledge of the issues and to hear from interested groups. The committee acknowledges the following individuals for their insightful comments at these workshops: Susan Borra, Margaret Cheney, Brenda Derby, Annette Dickinson, Robert Earl, Constance Geiger, Nancy Green, Suzie Harris, Regina Hildwine, Clifford L. Johnson, Allison Kretser, Bonnie Liebman, Alanna Moshfegh, Ian Munro, Robert Post, Leila Saldanha, Christine Taylor, and Kathryn Wiemer. In particular, the committee thanks Margaret Cheney, Robert Post, and Virginia Wilkening and their colleagues for assisting its research into the history and status of food labeling and fortification.

This report is a derivative of the DRI reports and as such reflects the work of the Standing Committee on the Scientific Evaluation of Dietary Reference Intakes and its panels and subcommittees. The multipart committee-panel structure that comprises the DRI process has led to a series of reports involving over 100 expert scientists who have rigorously maintained a consistent approach and understanding of the basic DRI definitions and derivations. While this report is outside of the framework of review for the DRI reports, its essence has benefited from the diligent work of those scientists.

In this report the Committee on Use of Dietary Reference Intakes in Nutrition Labeling presents its recommendations as a series of guiding principles to assist the regulatory agencies that oversee food labeling and fortification in the United States and Canada. Although the committee members have varying levels of past experience with food regulations in our respective countries, over the course of this

study we have gained a deeper appreciation for the difficulty and complexity of the steps necessary to develop a nutrition label and the policies of discretionary fortification that are truly helpful for the broad population of consumers in our two countries. We provide this guidance to FDA, FSIS, and Health Canada with the hope that it will assist them in moving the process forward so that the significant science base in the DRIs can rapidly be used to benefit the health of our nations.

Irwin H. Rosenberg, *Chair*
Committee on Use of Dietary Reference Intakes
in Nutrition Labeling

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